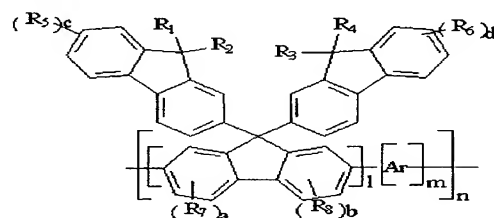


Claims

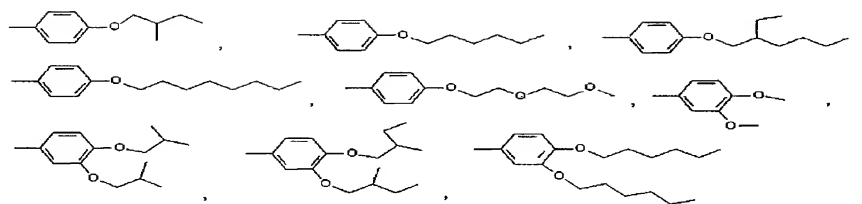
[1]

An organic electroluminescent polymer having 9,9-di(fluorenyl)-2,7-fluorenyl unit represented by the following Formula 1:

Formula 1



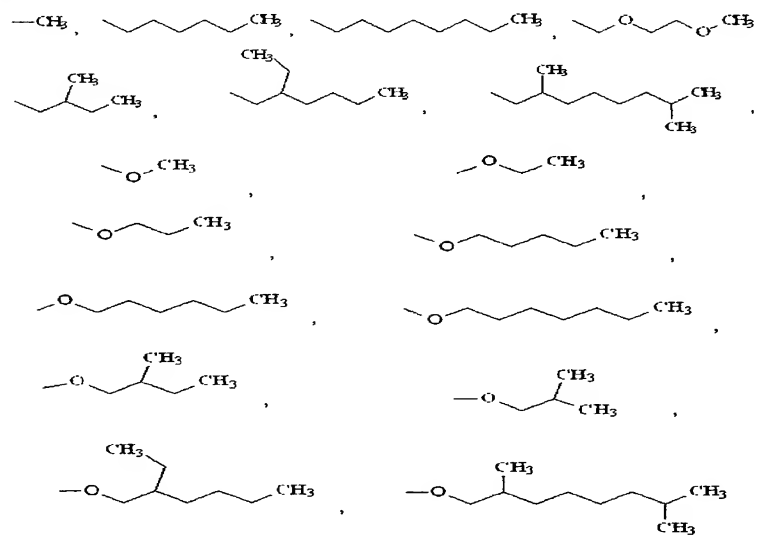
wherein, R₁, R₂, R₃ and R₄ are the same or different, each being a linear or branched alkyl group of 1-20 carbons; an aryl group which is unsubstituted or substituted with at least one substituent group selected from the group consisting of linear or branched alkyl and alkoxy groups of 1-20 carbons; a linear or branched alkyl group of 1-20 carbons having at least one hetero-atom selected from the group consisting of F, S, N, O, P and Si; an aryl group which is substituted with at least one substituent group selected from the group consisting of linear or branched alkyl and alkoxy groups of 1-20 carbons containing at least one hetero-atom selected from the group consisting of F, S, N, O, P and Si; an aryl group having a heterocyclic moiety of 2-24 carbons which is unsubstituted or substituted with at least one substituent group selected from the group consisting of linear or branched alkyl and alkoxy groups of 1-20 carbons; an aryl group having a heterocyclic moiety of 2-24 carbons which is substituted with at least one substituent group selected from the group consisting of linear or branched alkyl and alkoxy groups of 1-20 carbons containing at least one hetero-atom selected from the group consisting of F, S, N, O, P and Si; a substituted or unsubstituted trialkylsilyl group of 3-40 carbons; a substituted or unsubstituted arylsilyl group of 3-40 carbons; a substituted or unsubstituted carbazole group of 12-60 carbons; a substituted or unsubstituted phenothiazine group of 6-60 carbons; or a substituted or unsubstituted arylamine group of 6-60 carbons; R₅, R₆, R₇ and R₈ are the same or different, each being hydrogen; a linear or branched alkyl or alkoxy group of 1-20 carbons; an aryl group which is unsubstituted or substituted with at least one substituent group selected from the group consisting of linear or branched alkyl and alkoxy groups of 1-20 carbons; a linear or branched alkyl or alkoxy group of 1-20 carbons having at least one

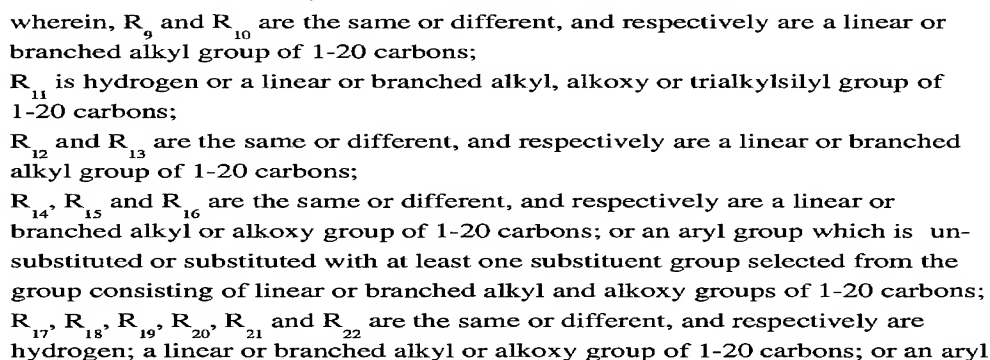


[3]

The organic electroluminescent polymer as set forth in claim 1, wherein said R_5 and R_6 , respectively are selected from the following group:

H,





group which is unsubstituted or substituted with at least one substituent group selected from the group consisting of linear or branched alkyl and alkoxy groups of 1-20 carbons;

X is O or S;

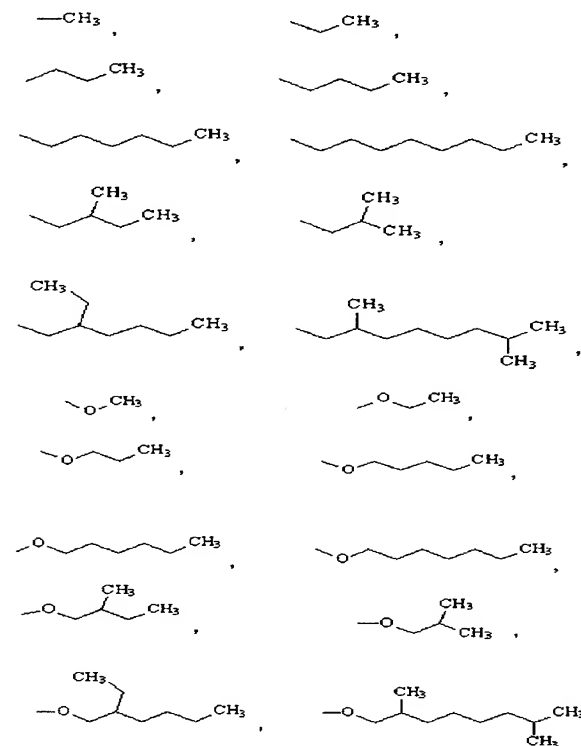
Y and Z are N; and

a is an integer of 1-3.

[4]

The organic electroluminescent polymer as set forth in claim 1, wherein said R_7 and R_8 , respectively are selected from the following group:

H,



[5]

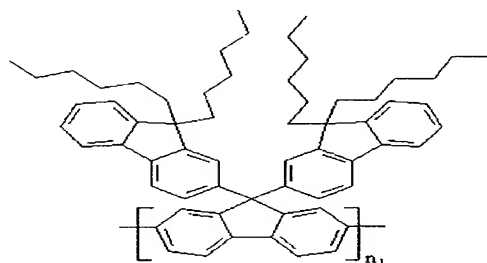
The organic electroluminescent polymer as set forth in claim 1, wherein said Ar is selected from the following group:

(i) a substituted or unsubstituted arylene group of 6-60 carbons;

- (ii) a substituted or unsubstituted heterocyclic arylene group of 2-60 carbons in which at least one hetero-atom selected from the group consisting of N, S, O, P and Si is incorporated in an aromatic ring;
- (iii) a substituted or unsubstituted arylenevinylene group of 6-60 carbons;
- (iv) a substituted or unsubstituted arylamine group of 6-60 carbons;
- (v) a substituted or unsubstituted carbazole group of 12-60 carbons; and
- (vi) combinations thereof,

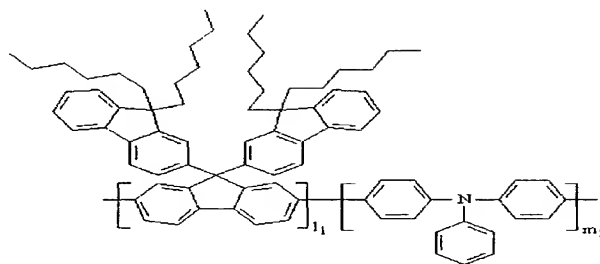
in which Ar may include a substituent selected from the group consisting of a linear or branched alkyl or alkoxy group of 1-20 carbons; an aryl group which is unsubstituted or substituted with at least one substituent group selected from the group consisting of linear or branched alkyl and alkoxy groups of 1-20 carbons; a cyano group (-CN); and a silyl group.

- [6] The organic electroluminescent polymer as set forth in claim 1, wherein a ratio of l:m ranges from 5:95 to 95:5.
- [7] The organic electroluminescent polymer as set forth in claim 5, wherein said Ar is present in an amount of 5-15 mol% in the electroluminescent polymer, with proviso of being a substituted or unsubstituted arylamine group of 6-60 carbons.
- [8] The organic electroluminescent polymer as set forth in claim 1, wherein the organic electroluminescent polymer has the following Formula 2:



wherein, n_1 is an integer from 1 to 100,000.

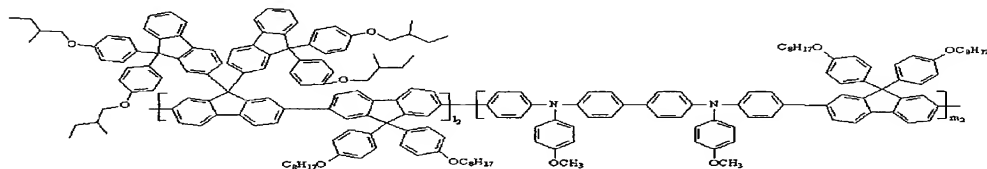
- [9] The organic electroluminescent polymer as set forth in claim 1, wherein the organic electroluminescent polymer has the following Formula 3:



wherein, l_1 is an integer from 1 to 100,000, and m_1 is an integer from 1 to 100,000.

[10]

The organic electroluminescent polymer as set forth in claim 1, wherein the organic electroluminescent polymer has the following Formula 4:



wherein, l_2 is an integer from 1 to 100,000, and m_2 is an integer from 1 to 100,000.

[11]

An organic electroluminescent device having at least one layer comprising the polymer according to claim 1 between an anode and a cathode, wherein, the layer is a hole-transport layer, a light emitting layer, an electron-transport layer or a hole blocking layer.

[12]

The organic electroluminescent device as set forth in claim 11, wherein the electroluminescent device comprises a structure of anode/light emitting layer/cathode, anode/hole transport layer/light emitting layer/cathode, or anode/hole transport layer/light emitting layer/electron transport layer/cathode.